# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/829,328 | 04/09/2001 | Christian May | GR 98 P 2892 P | 7122 |

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LERNER AND GREENBERG, PA
P O BOX 2480
HOLLYWOOD, FL 33022-2480

| EXAMINER |
|---|
| SHRADER, LAWRENCE J |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2193 | |

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Office Action Summary | Application No. | Applicant(s) |
|---|---|---|---|
| | | 09/829,328 | MAY ET AL. |
| | | **Examiner** | **Art Unit** | |
| | | Lawrence Shrader | 2193 | |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _02 February 2005_.

2a)☐ This action is **FINAL**.　　　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-5,9 and 10_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5,9 and 10_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

# DETAILED ACTION

1.      Claims 1 – 5, 9 and 10 are presented for examination; claims 6 – 8 and 11 have been

cancelled as requested by the Applicant.

2.      The Applicant's arguments have been fully considered, but are moot in view of the new

grounds of rejection.

## *Claim Rejections - 35 USC § 112*

3.      The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the

enablement requirement. The claim(s) contains subject matter that was not described in the

specification in such a way as to enable one skilled in the art to which it pertains, or with which

it is most nearly connected, to make and/or use the invention.   The storing step of claim 1 refers

to an address "...directly before and directly after a program instruction at the permissible entry

address." However, the specification always refers to addresses before or after a permissible

entry.  Also, on page 7 of the REMARKS, the Applicant stipulates storing the address

"immediately before or after the address of the program entry," being consistent with the

specification.   Storing before and after is not the same as storing before or after.  For

examination purposes "or" will be assumed.

## *Claim Rejections - 35 USC § 101*

4.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

5.      The rejection of claim 1 under 35 U.S.C. §101 because the claimed invention is directed

to non-statutory subject matter has been withdrawn in view of the amendments.

6.      Claim 5 is rejected under 35 U.S.C. 101 because the claimed invention lacks patentable

utility.  The claim recites a method of "verifying a permissible entry address...", "providing the

correlation of data..." in two limitations, "providing program instructions...", and "providing a

specific operation code..." It is unclear how any of these steps eventually relate to protecting an

entry address, which is indicated by the Abstract and the Title.  The steps provide data and

instructions without showing how providing this information leads to a step or steps of protecting

the entry address.

## *Claim Rejections - 35 USC § 102*

7.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8.      Claims 1 – 5, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Gheith,

U.S. Patent 5,797,014.

**In regard to claim 1**:

> *"verifying a permissible entry address by using a correlation of data, wherein the data are not provided within a same individual instruction for authenticating the permissible entry address of a computer program;"*

> *"storing, in a memory cell, an address of a correlated data item one of directly before and directly after a program instruction at the permissible entry address."*

See Gheith column 3, lines 1 – 30.

**In regard to claim 2**, incorporating the rejection of claim 1:

> *"...which comprises storing, in the memory cell, a reference to a data entry in a protected list of legal entry addresses one of directly before and directly after the permissible entry address."*

See Gheith column 3, lines 1 – 30, insertion before the function entry point.

**In regard to claim 3**, incorporating the rejection of claim 1:

> *"...which comprises directly jumping to the permissible entry address."*

See Gheith column 3, lines 1 – 30.

**In regard to claim 4**, incorporating the rejection of claim 1:

> *"...which comprises automatically checking whether the correlation of data is satisfied for a respective entry address, when a function call is carried out."*

See Abstract and Gheith column 3, lines 1 – 30.

**In regard to claim 5**:

> *"verifying a permissible entry address by using a correlation of data, wherein the data are not provided within a same individual instruction;"*

> *"providing the correlation of data as a correlation with program data in non-reserved memory areas."*

> *providing the correlation of data as a correlation between code data items, the code data items being at least n bytes away from one another;*

See Abstract and Gheith column 3, lines 1 – 30.

> *"providing program instructions not exceeding a given maximum number n of bytes, n being an integer number;"*

> *"providing a specific no-operation code for avoiding random correlations."*

Computer code would inherently contain program instructions not exceeding n bytes

where n in an integer. No-op codes, inherent in all instruction sets, would not exceed the same

fixed length.


**In regard to claim 9**:

> *"verifying a permissible entry address by using a correlation of data, wherein the data are not provided within a same individual instruction;"*

> *"providing the correlation of data as a correlation with program data in non-reserved memory areas."*

> *"providing a specific byte sequence which cannot occur within a regular code, the specific byte sequence being provided for the correlation of data;"*

> *"protecting the permissible entry address by inserting the specific byte sequence."*

See Abstract and Gheith column 3, lines 1 – 30.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gheith, U.S.

Patent 5,797,014 in view of Martin, U.S. Patent 4,439,828.

**In regard to claim 10**, incorporating the rejection of claim 9:

*"...which comprises using a specific no-operation code as the specific byte sequence."*

Gheith discloses protecting an entry address, but does not explicitly disclose an inserted

instruction as a no-op code. However, no-op codes are inherent in all instruction sets, or may

be constructed as a specific pseudo op-code not found in the assigned op-codes of the

instruction set to be used for substitution as disclosed by Martin at column 9, lines 14 – 32.

Therefore, it would have been obvious to one skilled in the art at the time the invention was

made to combine the address protection of an entry address as disclosed by Gheith with the

substitute instruction taught by Martin that includes a special no-operation because it allows a

condition where no function is to be performed in order to accomplish a task more efficiently by

avoiding performance degradation as taught by Martin at column 2, lines 7 – 16.
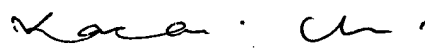
## *Conclusion*

9.      Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Shrader whose telephone number is (571) 272-3734. The examiner can normally be reached on M-F 08:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence Shrader
Examiner
Art Unit 2193

14 June 2005

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100